



Form PTO-144

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICEATTY. DOCKET NO.
36115SERIAL NO.
10/666,976INFORMATION DISCLOSURE CITATION
BY APPLICANT
(USE SEVERAL SHEETS IF NECESSARY)
(page 1 of 7)APPLICANT:
Brian H. Harrison et al.FILING DATE:
September 18, 2003

GROUP ART UNIT:

U.S. PATENT DOCUMENTS

| Examiner Initial | | Document No. | Date | Name | Class | Subclass | Filing Date If Appropriate |
|------------------|---|--------------|---------|------------|-------|----------|----------------------------|
| | A | 19,172 | 1/1858 | Hall | | | |
| | B | 22,217 | 11/1858 | Hall | | | |
| | C | 23,740 | 4/1859 | Baschnagel | | | |
| | D | 23,805 | 8/1859 | Baschnagel | | | |
| | E | 25,160 | 8/1859 | Hall | | | |
| | F | 29,717 | 8/1860 | Richards | | | |
| | G | 226,070 | 3/1880 | Heyer | | | |
| | H | 419,697 | 1/1890 | Mitchell | | | |
| | I | 420,820 | 2/1890 | Mitchell | | | |
| | J | 425,896 | 4/1890 | Mitchell | | | |
| | K | 1,169,437 | 1/1916 | Staunton | | | |

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| | | Document No. | Date | Country | Class | Subclass | Translation |
|--|---|--------------|--------|---------|-------|----------|-------------|
| | L | 44 47 357 AI | 6/1996 | DE | | | |
| | M | 0 775 738 AI | 5/1997 | EP | | | |

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

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|--|---|--|
| | N | "Pyrolysis", Rubber Manufacturers Association, May 2002, <i>one page</i> . |
| | P | "Science and Technology of Reclaimed Rubber", D.S. Le Beau, Rubber Chemistry and Technology, 40, (1967), p. 217-237. |
| | Q | "Pyrolysis Process for Scrap Tires", Shigeo Kawakami et al., ACS Symposium Series 130, (1980), p. 557-572. |

Examiner:

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|--|--|--|--------------------------|
| Form PTO-1449 | U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE | ATTY. DOCKET NO. 36115 | SERIAL NO. 10/666,976 |
| INFORMATION DISCLOSURE CITATION BY APPLICANT <i>(USE SEVERAL SHEETS IF NECESSARY)</i> (page 2 of 7) | | APPLICANT: Brian H. Harrison et al. | |
| | | FILING DATE: September 18, 2003 | GROUP ART UNIT: |

U.S. PATENT DOCUMENTS

| Examiner Initial | | Document No. | Date | Name | Class | Subclass | Filing Date If Appropriate |
|------------------|---|--------------|---------|---------------|-------|----------|----------------------------|
| | A | 1,335,926 | 4/1920 | Twiss | | | |
| | B | 1,963,943 | 6/1934 | Gross | | | |
| | C | 2,079,489 | 5/1937 | Cole | | | |
| | D | 2,154,894 | 4/1939 | Essex | | | |
| | E | 2,276,248 | 3/1942 | Kirby | | | |
| | F | 2,287,095 | 6/1942 | Federman | | | |
| | G | 2,313,146 | 3/1943 | Hirschberger | | | |
| | H | 2,317,491 | 4/1943 | Solakian | | | |
| | I | 2,391,714 | 12/1945 | Kirby, et al. | | | |
| | J | 2,794,006 | 5/1957 | Naudain | | | |
| | K | 3,272,761 | 9/1961 | Glenn, et al. | | | |

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| | | Document No. | Date | Country | Class | Subclass | Translation |
|--|---|--------------|--------|---------|-------|----------|------------------|
| | L | 1 101 812 A1 | 5/2001 | EP | | | |
| | M | 95/20007 | 7/1995 | WO | | | English abstract |

OTHER REFERENCES *(Including Author, Title, Date, Pertinent Pages, Etc.)*

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| | N | "Characterization of pyrolytic light naphtha from vacuum pyrolysis of used tyres Comparison with petroleum naphtha", B. Benallal et al., Fuel, 74, No. 11, (1995), p. 1589-1594. |
| | P | "Composition of oils derived from the batch pyrolysis of tyres", Adrian M. Cunliffe et al., Journal of Analytical and Applied Pyrolysis, 44, (1998), p. 131-152. |
| | Q | "The pyrolysis of automotive tyre waste", P T Williams et al., Journal of the Institute of Energy, 68, (1995), p.11-21. |

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U.S. PATENT DOCUMENTS

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|------------------|---|--------------|---------|------------------|-------|----------|----------------------------|
| | A | 4,051,080 | 09/1977 | Boccoli | | | |
| | B | 4,052,344 | 10/1977 | Crane, et al. | | | |
| | C | 4,104,205 | 8/1978 | Novotny | | | |
| | D | 4,133,446 | 1/1979 | Albert | | | |
| | E | 4,148,763 | 4/1979 | Bryson | | | |
| | F | 4,164,265 | 8/1979 | Kucharczyk | | | |
| | G | 4,264,481 | 4/1981 | Markvik | | | |
| | H | 4,341,619 | 7/1982 | Poska | | | |
| | I | 4,384,150 | 5/1983 | Lyakhevi, et al. | | | |
| | J | 4,384,151 | 5/1983 | Audibert, et al. | | | |
| | K | 4,388,171 | 6/1983 | Beggs, et al. | | | |

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| | | Document No. | Date | Country | Class | Subclass | Translation |
|--|---|---------------|--------|---------|-------|----------|-------------|
| | L | 0 702 076 B 1 | 3/1999 | EP | | | |
| | M | 2 459 822 | 1/1981 | FR | | | No |

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| | N | "Pyrolysis of automobile shredder residue: an analysis of the products of a commercial screw kiln process", M. Day et al., Journal of Analytical and Applied Pyrolysis, 37, (1996), p. 49-67. |
| | P | "Pyrolysis of automobile tyre waste. Influence of operating variables and kinetics study", Juan F. Gonzalez et al., Journal of Analytical and Applied Pyrolysis, 58-59, (2001), p. 667-683. |
| | Q | "Subcritical and Supercritical Extraction of Oil from Used Automotive Tire Samples", Toshitaka Funazukuri et al., Journal of Chemical Engineering of Japan, 18, No. 5, (1985), p. 455-460. |

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| | A | 4,395,501 | 7/1983 | Briggs, et al. | | | |
| | B | 4,446,012 | 5/1984 | Murthy, et al. | | | |
| | C | 4,465,888 | 8/1984 | Paspek, Jr. | | | |
| | D | 4,483,761 | 11/1984 | Paspek, Jr. | | | |
| | E | 4,544,675 | 10/1985 | Anderson, Jr. | | | |
| | F | 4,642,401 | 2/1987 | Coenen, et al. | | | |
| | G | 4,657,681 | 4/1987 | Hughes, et al. | | | |
| | H | 5,070,109 | 12/1991 | Ulick, et al. | | | |
| | I | 5,106,513 | 4/1992 | Hong | | | |
| | J | 5,236,352 | 8/1993 | Carpenter | | | |
| | K | 5,386,055 | 1/1995 | Lee, et al. | | | |

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| | | Document No. | Date | Country | Class | Subclass | Translation |
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| | L | 96/38496 | 12/1996 | WO | | | English abstract |
| | M | 0 694 600 B 1 | 4/1999 | EP | | | |

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| | N | "Supercritical Extraction of Used Automotive Tire With Water", Toshitaka Funazukuri et al., Journal of Chemical Engineering of Japan, 20, No. 1, (1987), p. 23-27. |
| | P | "Statistical study of the liquefaction of used rubber tyre in supercritical water", Sangdo Park et al., Fuel, 76, No. 11, (1997), p. 999-1003. |
| | Q | "Supercritical fluid extraction of scrap tyres", John R. Kershaw, Fuel, 77, No. 9/10, (1998), p. 1113-1115. |

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| | A | 5,400,642 | 3/1995 | Salvador Palacios, et al. | | | |
| | B | 5,418,256 | 5/1995 | Dhawan, et al. | | | |
| | C | 5,437,696 | 8/1995 | Verkade, et al. | | | |
| | D | 5,502,262 | 3/1996 | Yamasaki, et al. | | | |
| | E | 5,516,952 | 5/1996 | Lee, et al. | | | |
| | F | 5,639,934 | 6/1997 | Yamasaki, et al. | | | |
| | G | 5,728,361 | 3/1998 | Holley | | | |
| | H | 5,731,483 | 3/1998 | Stabel, et al. | | | |
| | I | 5,771,821 | 6/1998 | Zhuravsky, et al. | | | |
| | J | 5,780,518 | 7/1998 | Mulyarchik, et al. | | | |
| | K | 5,843,386 | 12/1998 | Makino, et al. | | | |

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|--|---|--------------|---------|---------|-------|----------|-----------------------------|
| | L | 2,025,044 | 12/1999 | Canada | | | English abstract and claims |
| | M | 2,307,973 | 12/2000 | Canada | | | English abstract and claims |

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

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| | N | "Depolymerization Reactions of cis-Polyisoprene and Scrap Rubber in Supercritical Toluene", Jagdish C. Dhawan et al., American Chemical Society Symposium, 514, (1993), p. 380-394. |
| | P | "Reaction Products of Styrene-Butadiene ABA Block Copolymer in Supercritical Toluene and Tetralin", Jagdish C. Dhawan et al., The Journal of Supercritical Fluids, 4, (1991), p. 160-165. |
| | Q | "Extraction with supercritical fluids: Why, how, and so what", Gale G. Hoyer, Chemtech, (1985), p. 440-448. |

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